



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,503	06/17/2005	Hans-Joachim Hahnle	272526US0PCT	6375
22850	7590	10/05/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CORDRAY, DENNIS R	
			ART UNIT 1731	PAPER NUMBER
			NOTIFICATION DATE 10/05/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

**Office Action Summary**

Application No.

10/539,503

Applicant(s)

HAHNLE ET AL.

Examiner

Dennis Cordray

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 4-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/17/2005</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 4-13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim *cannot depend from any other multiple dependent claim*. See MPEP § 608.01(n). Accordingly, the claims 4-14 have not been further treated on the merits.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Utecht et al (6057404).

Utecht et al discloses copolymers made by copolymerizing N-vinylcarboxamides with other copolymerizable monoethylenically unsaturated monomers, followed by hydrolyzing from 0.1 to 100 mol-% of the N-vinylcarboxamide units to obtain amphoteric vinylamine copolymers (col 2, lines 39-57; col 4, lines 4-23). N-vinylformamide is

Art Unit: 1731

disclosed as a preferred N-vinylcarboxamide (col 2, lines 56-57). Suitable monoethylenically unsaturated monomers include C<sub>3</sub>-C<sub>6</sub> carboxylic acids, such as acrylic acid and methacrylic acid (col 2, lines 58-62); acrylate salts with sulfonic acid (col 3, lines 18-22); and monomers containing sulfo groups, such as vinylsulfonic acid, allylsulfonic acid, methylallylsulfonic acid, styrenesulfonic acid, the alkali metal or ammonium salts of these acids, or 3-sulfopropyl acrylate (col 3, lines 56-60).

The copolymers are used as emulsifiers for producing aqueous filler suspensions. Suitable fillers are clay, chalk titanium oxide and kaolin (Abs; col 6, lines 62-67).

Utecht et al does not disclose that the copolymers are water soluble. However, the polymers are made by polymerizing the claimed monomers, followed by hydrolysis, to form a substantially identical polymer to the claimed polymer, thus are water-soluble or, at least, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain water-soluble polymers because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Utecht et al also does not disclose a filler slurry comprising finely divided fillers. However, it is well known in the art that the disclosed fillers are typically microparticles or nanoparticles, thus are finely divided particles. It would have been obvious to one of ordinary skill in the art to obtain

an emulsified suspension of the filler particles in finely divided form per the disclosed use of the copolymers.

3. Claim 1 is a product-by-process claim. The product of Utecht et al appears to be the same as or similar to the claimed product, a suspension comprising fillers and a copolymer comprising hydrolyzed N-vinylformamide units and sulfonic acid units, although produced by a different process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). "In the event any differences can be shown for the product of the product-by-process claim 1 as opposed to the product taught by the reference Utecht et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)"

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hartmann et al (5008321).

Hartmann et al discloses copolymers made by copolymerizing N-vinylcarboxamides with other copolymerizable monoethylenically unsaturated monomers, followed by hydrolyzing the N-vinylcarboxamide units to obtain amphoteric vinylamine copolymers (Abs; col 2, lines 14-68; col 7, lines 39-58). N-vinylformamide is disclosed as a preferred N-vinylcarboxamide (col 2, lines 64-65). Suitable

Art Unit: 1731

monoethylenically unsaturated monomers include C<sub>3</sub>-C<sub>5</sub> carboxylic acids, such as acrylic acid and methacrylic acid (col 3, lines 1-7); monomers containing sulfo or phosphonate groups, such as vinylsulfonic acid, allylsulfonic acid, methylallylsulfonic acid, styrenesulfonic acid, 3-sulfopropyl acrylate, acrylamidomethylpropane sulfonic acid, vinylphosphonate, allylphosphonate, methylallylphosphonate, styrenephosphonate, and acrylamidomethylpropane phosphonic acid (col 3, lines 13-20 and 29-33); and monomers having a diethylenically unsaturated molecule (col 3, lines 62-68; col 4, lines 1-2).

The copolymers are used drainage aids, retention aids and flocculants in papermaking. An example is given of a composition comprising the disclosed copolymer and kaolin. (Abs; col 16, lines 18-26).

Hartmann et al does not disclose that the polymers are water soluble. However, the polymers are made by polymerizing the claimed monomers, followed by hydrolysis, to form a substantially identical polymer to the claimed polymer, thus are water-soluble or, at least, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain water-soluble polymers for reasons previously given. Hartmann et al also does not disclose that the filler slurry comprises finely divided fillers. However, it would have been obvious to one of ordinary skill in the art to obtain an emulsified suspension of the kaolin particles in finely divided form for reasons given previously.

Art Unit: 1731

5. Claim 1 is a product-by-process claim. The product of Hartmann et al appears to be the same as or similar to the claimed product, a suspension comprising fillers and a copolymer comprising hydrolyzed N-vinylformamide units and sulfonic or phosphoric acid units, although produced by a different process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). "In the event any differences can be shown for the product of the product-by-process claim 1 as opposed to the product taught by the reference Hartmann et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)"

### ***Double Patenting***

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

6. Claims 1-3 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3 of copending Application Nos. 11/181993. This is a

Art Unit: 1731

provisional double patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application Nos. 11/082904. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application and the instant claims are related as genus and species. The claims of the copending application require a monoethylenically unsaturated monomer free of nitrile groups, which is generic to the sulfonic acids, phosphoric acids and phosphoric esters of the



Art Unit: 1731

instant claims. One of ordinary skill in the art would have found it obvious that an amphoteric polymer is at least partially attracted to typically anionic filler particles.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
DRC

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700